FOX450B

Enhanced All-in-One xDSL Test Set
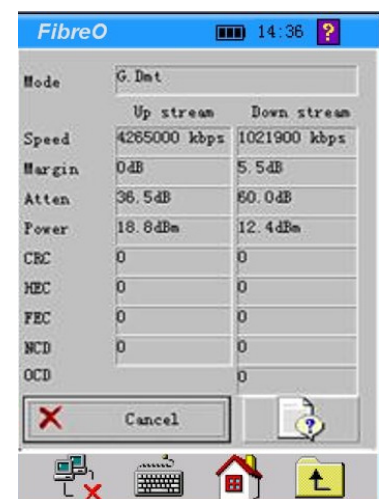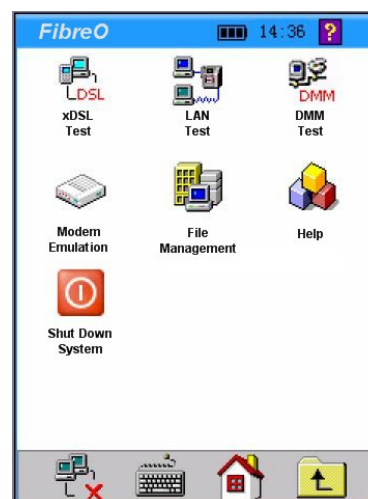

Key Features

- Consolidation of DSL modem, PING and Metallic Testing

- Support three types of emulation:
  Modem emulation (through mode)
  PC emulation
  PC+Modem emulation

- Web Browse - after succeeding in PPPoE/ PPPoA Dial, the user can surf on the internet

- Fast and easy copper loop qualification for ADSL2+ services with a pass/fail indication and programmable thresholds

- Fully-featured ADSL/ADSL2+ tests quickly verify provisioned rates and service quality

- Discovery – search and identify devices on the same LAN

- WinCE Operation system

- 240 x 320 TFT true color LCD display and touch screen

- Identify ATU-C brand

- Determine telephone line faults (line break or mix)

- Power Management

- Line voltage indication

- USB Port - USB equipment, keyboard, mouse and memory stick

- Provide two Ethernet ports – direct (Hub) and cross (Network)

- Big data memory capacity - up to 20M or using external memory stick via USB port

- DC operation with vehicle power adapter

FOX450B, a consolidation of DSL modem, IP PING and Metallic Testing is specially designed to meet the urgent requirements of xDSL testing including ADSL, ADSL2, ADSL2+ and READSL. It is particularly used by a field technician for DSL installation and maintenance.

FOX450B can not only test physical parameters but also help to judge whether the line is suitable to provide xDSL services and evaluate service quality. In fact, field technicians do not need to know line parameters and specifications. To them, the most important is to determine the service quality and locate the faulty points.

FOX450B can perform PPPoE/PPPoA dial, browse IE webpages and emulate a user's PC+ Modem to test the connectivity from the user to ISP. After successful PPP dial, network layer tests such as IP Ping, Ipconfig, Route, and Tracert can be fulfilled. The powerful tester can even emulate the user's PC to test broadband IP line or perform PPPoE /PPPoA dial through user's Modem in order to verify the connectivity of IP network and the problem of user's Modem as well as eliminate malfunctions that lead to login failure to WebPages caused by the user's PC.

FOX450B adopts 240 x 320 TFT true colors LCD with a touching screen – so easy to operate and setup parameters, and display results intuitively.

Comprehensive xDSL and LAN Access Testing

xDSL Test

FOX450B emulates DSL CPE modem and PC to perform physical layer, network layer and application layer test. It also allows the user to pre-setup criteria to further analyze the DSL line condition and score quality of service.

It includes the tests below:

DSL Layer Test
Perform fast synchronization test at customer's premises; determine whether rates promised are rates delivered; confirm parameters for ADSL/ADSL2/ADSL2+. FOX450B will display bits per tone in graphics after successfully linking up with DSLAM.

Noise Margin Curve
FOX450B can measure the real time up/down stream noise margin changes and display in graphics. The results reflect the DSL line stability again environment changes. It is a helpful parameter for troubleshooting an unstable DSL service.

Verification ATM Mapping
ATM loopback functionalities.

PPP dialing
The user can fulfill PPPoE (or PPPoA) dialing through PPPoE (or PPPoA) test account. After successful dialing, it will obtain local/destination IP, DNS server IP and subordinate IP address, and PPP LED will be shinning. 7 VPI/VCI groups are preset for the user to select conveniently and they are also user-definable. And the user may also select and set PAP, CHAP, MS-CHAP and MS-CHAP V2 authorization method.

Network Layer Test
Verifying connectivity to the Internet via tests of IP Ping, Ipconfig, Tracert and Route.
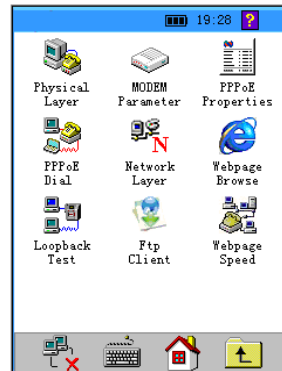
Web Speed

Webpage Browsing Test

FTP Client

Modem emulation

FOX450B can replace the user Modem completely. The user could take FOX450B as a DSL modem to do PPP dial and log into the Internet and determine if the customer modem works properly. FOX450B will also provide link parameters and statistics.

LAN Test

FOX450B emulates PC to perform PPPoE dial test, network layer and application layer test of LAN.

It includes the below tests:

LAN port PPPoE Dial
Verify if Broadband IP or LAN performs normally. And the user may also select and set PAP, CHAP, MS-CHAP and MS-CHAP V2 authorization method.

Data Rate and Through Put
After successful PPP dialing, FOX450B can display data rate and through put of the link.

Network Layer Test
Ping, Ipconfig, Tracert and Route.

Fixative IP – search for devices on the same LAN. It will display both IP address and host name.

Web Speed

Webpage Browsing Test

FTP Client

Copper Testing

FOX450B can measure AC/DC Voltage, Capacitance, Loop Resistance and Insulation Resistance for basic line trouble-shooting. It also estimates loop distance.

Indicate Line Voltage
For safety purposes, when line voltage greater than 80VDC or 50VAC is detected, FOX250 will display warning message and the voltage indicator LED will be turned on informing the technician of the loop condition.

Data storage, file transfer and management software

FOX450B can save results including line parameters, channel bit chart and error test to built-in 20Mb memory or external memory stick via a USB port or upload them to a PC via the unit's LAN port for records or further analysis. Test results can be transferred to other PCs on the same LAN. Using the software all parameters can be preset before passing the test set to the technician for test campaign and collecting test results after. Technicians do not have to worry about setting the unit at all, thus increasing test efficiency significantly.

Specifications

ADSL/ADSL2/ADSL2+

Emulation	ATU-R modem/Through mode
	PC Emulation
	Modem+ PC
Standards	ITU G.992.1 (G.dmt),
	ITU G.992.2 (G.lite),
	ITU G.992.3 (ADSL2)
	ITU G.994.1(G.hs),
	ANSI T1.413 issue #2,
	ITU G.992.5 (ADSL2+) Annex L.
Rate Supported	Downstream: up to 24Mbps;
	Upstream: up to 1.2Mbps;
Physical Layer	Max bit rates
Features Supported	Actual bit rates
	Mode: Fast/Interleaved
	Capacity
	Attenuation (0 ~ 63.5dB)
	Noise margin (0 ~ 32dB)
	Output power
	DSL Connection Mode
	Noise Margin Curve
	Time of Measurement
	Number of Connection
	Determine service quality: Excellent, good, ok or poor
ATM Layer	VPI/VCI Configuration - 7 pre-set groups and user definable
	VC-Mux and LLC Multiplexing
	ATM PING (OAM Loopback)
Protocols Supported	PPPoE (RFC2516) with PAP, CHAP, MS-CHAP,
	MS-CHAP V2 session
	PPPoA (RFC2364)
	Ethernet over ATM/Bridge RFC1483
IP PING	WAN and LAN
	PING IP address or URL
	Package Size, Test Times, Delay
Ipconfig	TCP/IP, DHCP, DNS Setup, IP/Netmask/Gateway
Route	Print, Add, Delete or Change route
Tracert	IP address, Name, Hops, Delay
	Support IPv4 and IPv6
Web Speed	IP Address and URL
	Time and Rates
IE Webpage Test	IP Address/URL
	IE window
FTP Client	IP Address/URL
	File, Time and Rates
Discovery	Search and identify the IP address, name, host and MAC address of devices in the same Local Area Network
Errors Measurement	LOS - Loss of Signal
	CRC - Cyclic Redundancy Check
	HEC - Header Error Correction
	FEC - Forward Error Correction
	NCD - No Cell Delineation
	OCD - Out of Cell Declination

DMM Measurement

Test	Test Range	Accuracy
DC Voltage	0 ~ 100 VDC	±2%
	100 ~ 200 VDC	± 5%
	200 ~ 400 VDC	±5%
AC Voltage	0 ~ 100 VAC	±2%
	100 ~ 400 VAC	±5%
Loop Resistance	0 ~ 100Ω	±3%
	100 ~ 500Ω	±3%
	500 ~ 2000Ω	±2%
	2000 ~ 20KΩ	±2%
Capacitance	0 ~ 10 nF	±2 nF
	10 ~ 1000nF	±2%
Loop Distance Estimation	Based on the value of Loop Resistance or Capacity under condition of clean cable	
Insulation Resistance @100V	0 ~ 1.0 MΩ	±0.1 MΩ
	1.0 ~ 50 MΩ	±10%

General Specifications

Display	240×320 TFT true color LCD, touch screen, WinCE
Software	Remote Management software allows user to preset parameter and upload test results via Ethernet port.
Memory	20M
Interfaces	RJ11/ 2 PIN connector - DSL and DMM Test Port
	10/100Mbps Ethernet Port for through mode testing
	RJ45 Ethernet - Comm Port
	USB - software upgrade, keyboard and external memory
LED	Ethernet Link status/Data
	xDSL Act − Data/PPP
	xDSL Link Status - Negotiating/Training or Linked up
	Power Status
Power Supply	Rechargeable 7.4V, 2700mAH Li-Ion
	Operating time (approx.) – 8 hrs (typical measurement)
	AC adapter (110 ~ 250VAC, 50/60Hz)/output 7.4V
	Vehicle power adapter (Optional)
	Power Management – auto power off and low battery warning 1 minute before shutting down.
Max Test Distance	6.5km
Time and date	Setup with built-in clock and calendar
Temperature (Operation)	0 ~ 40ºC
Temperature (Storage)	-20ºC ~ 70ºC
Relative Humidity	up to 85% non-condensing
Dimension (mm)	176 (L) × 130 (W) × 60 (H)
Weight (w/Battery)	<700g

Certificate CE

Note:
Specifications subject to change without notice

Accessories

Direct Ethernet cable	1 piece
Test Cable	1 piece
LCD Protection Cover	1 piece
Touch screen stick	1 piece
Li-Ion rechargeable battery	1 pack
AC/DC Power Adapter	1 piece
User manual	1 hard copy
Management software	1 CD
Soft carrying case	1 case
Handle	1 piece
Vehicle power adapter	Optional

Order Information

Model	FOX450B

Related Products

FOX250	ADSL2+ test set
FOX450M	Multimedia Test set
FOX600CQ	Cable Qualification Test Set

Distributor Information

Email:	